

# (12) United States Patent

# Zivkovic et al.

### (54) DUAL CHAMBER PASSIVE RETRACTION **NEEDLE SYRINGE**

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ABSTRACT (57)

Embodiments of a retractable syringe assembly are provided that include a single syringe barrel configuration and dual syringe barrel configuration. In one or more embodiments, the assemblies include a barrel having a dividing wall to divide the chamber to define a fluid chamber having a first cross-sectional width for retaining fluid and a needle chamber for housing a needle hub assembly. The assemblies include a projection extending radially outwardly from the plunger rod to interact with a ramped portion of the dividing wall to cause the needle cannula to retract and be housed within the needle chamber.

#### 16 Claims, 27 Drawing Sheets

